REFORMED CALENDAR

A CALENDAR project which ignores the immutable character of the week has slight chances of being adopted because the week is fixed by religious observance in all christian nations. The calendar here proposed is based on the week as a fundamental unit. It is closely similar to the calendar recently proposed by Dr. C. G. Hopkins, but differs in that it consists of a year of thirteen months, each four weeks in length, instead of Dr. Hopkins's twelve months divided into quarters of three months, each quarter containing two four-week months and one five-week month. Dr. Hopkins's reason for retaining twelve months is that the quarters of the year may be even months, but the value of the quarter year as a unit of time is incomparably less than the value of the month. It is highly desirable to have all the months the same length for the reason that salaries, wages, rent, board and many other ordinary affairs are counted in months. The advantage to be gained by having months of uniform length is one of the most marked advantages to be gained by a reform of the calendar.

In the present project the new month is inserted between June and July. This is the month in which the summer solstice occurs in the northern hemisphere and the winter solstice in the southern hemisphere, hence it may properly be called "Sol"—the month of the solstice.

In the new calendar the quarters are easily found, as each consists of thirteen weeks. The four quarters would end on the following dates: first quarter, April 7; second quarter, Sol 14; third quarter, September 21; fourth quarter, December 28; and these dates would all be Sunday in the new calendar. The present project therefore contains all the advantages of Dr. Hopkins's project, and the additional advantage of having all the months the same length, as well as multiples of the week.

Other advantages of the new calendar are: the year always begins on Monday; every month begins on Monday; the same day of the year always occurs on the same day of the week; the same is true of the days of the month. Thus, the first, eighth, fifteenth and twenty-second of every month would fall on Monday; the seventh, fourteenth, twenty-first and twenty-eighth of every month would fall on Sunday.

If desired Sunday may as well be taken as the initial day of the week, month and year.

An additional advantage is that a calendar for one year is good for all future time, as the years are all alike in all respects except that every fifth year has an extra week added to December, with exceptions noted below.

The details of the project are as follows:

Common years consist of thirteen months of four weeks each, namely, January, February, March, April, May, June, Sol (the month of the solstice), July, August, September, October, November and December;

Long years differ from common years in having an extra week added to December;

Years divisible by five are long years, with the exceptions noted below:

The extra week is omitted from years divisible by 50. It is also omitted in the year '25 following centennial years divisible by 400, and in the year '75 following centennial years divisible by 25,000. This makes a calendar good for more than 300,000 years.

In order to cause less confusion, this calendar should be adopted in a year that begins on Monday. In the near future these years are 1912, 1917 and 1923.

In order to secure the adoption of a reformed calendar, we must secure the appointment of an international commission with representatives from all civilized nations. It seems to me that our present duty is to begin a serious attempt to secure the appointment of such a commission. Can we not form an organization for this purpose?

W. J. SPILLMAN

WASHINGTON, D. C.

## *QUOTATIONS*

THE SCIENCE MUSEUM AND THE NATURAL HISTORY MUSEUM

DURING the past few weeks we have printed letters from several distinguished correspon-

dents dealing, from various points of view, with the very serious question that has arisen between the Office of Works and the trustees of the Natural History Museum concerning the respective claims of that museum and of the adjacent Science Museum to what remains still unoccupied of the space which separates the one from the other. No one can think that the buildings in which the Science Museum is at present housed are worthy of the dignity of science, or of their position as associated with the central home of science in the capital of a great empire. Every one should approve, therefore, of the recent appointment of a committee by the president of the board of education to consider the demolition of existing buildings and the construction of a new Science Museum on a scale worthy of its purpose and character. But it would appear from the recently published official correspondence between the Office of Works and the trustees of the Natural History Museum that this committee is only empowered to consider the construction of an enlarged Science Museum on the site now occupied by the unworthy and unsightly buildings which now go by that name. It is clear, however, that this can not be done—for on this point, at any rate, the Office of Works and the trustees are in full agreement—without encroaching on the space required for future enlargements, already urgently needed, of the Natural History Museum, and in fact on space which after much correspondence between the trustees, the Office of Works, and the Treasury, was formally allotted in 1899 to the Natural History Museum for that purpose. In the interest of the new Science Museum the Office of Works now proposes to resume possession of a strip some seventy feet wide and some 1,200 feet long, running the whole length of the north side of the area hitherto allotted to the Natural History Museum. This strip is at present occupied as to some portion of its length by a Spirit Museum—that is, a building for the storage and exhibition of specimens preserved in spirit, 145,000 in number, contained in 95,000 jars, many of large size—which has been erected and fitted up within recent years at a total cost of no less than £38,000. It is now proposed that, as soon as the Spirit Museum has been removed to a new and very objectionable site, a portion of this strip some forty feet wide should be assigned to the new Science Museum, while the remainder, some thirty feet wide, is to be converted into a private road separating the two museums.

It should surprise no one that the trustees should, as they say, view these proposals "with extreme apprehension." The only wonder is, perhaps, that the Office of Works should ever have entertained them seriously. It was originally proposed that the total area to be assigned to the Natural History Museum should be about fifteen and a half acres, and the steady growth of the museum in recent years has shown that this was not a yard too much. By the arrangement of 1899, to which we have already referred, this area was reduced to a little over thirteen acres, and it is now proposed to reduce it by very nearly two acres more, although, as the trustees point out, the reduced area of 1899 was accepted on the understanding that it was their intention to use the land in question for the further extension of the Spirit Museum, and "it can only have been by reason of such understanding that the trustees felt justified in accepting that line of boundary as a final settlement of the question." Yet if the Office of Works is to have its way, that final settlement is now to be treated as no settlement at all. The northern boundary is to be set back by seventy feet; the Spirit Museum is to be abolished and reerected facing Queen's Gate in such a position on the vacant space still surrounding the Natural History Museum as grievously to impair the symmetry and sightliness of any future extension of the latter; and the Science Museum and the Natural History Museum are to be left and even encouraged to approach each other from the north and south respectively in such a manner as may and probably will leave in the end only a private road some thirty feet wide between them. We can hardly believe that parliament and public opinion will ever sanc-

tion these extraordinary and most objectionable proposals. To judge from the correspondence which we have printed on the subject, they appear to find favor with no one—for even Sir Henry Roscoe could only find something to say for them by making a suggestion for the removal of the Spirit Museum to a distant site which other equally high authorities have shown to be inadmissible—and they have elicited protests of unanswerable cogency from naturalists of such high authority as the master of Christ's and Dr. Gilbert Bourne, as well as from the Linnean Society, the Entomological Society, and the Royal Horticultural Society. Moreover, the emphatic protests on other grounds and from other points of view of Lord Wemyss and of Lord Dufferin and those associated with him are by no means to be overlooked.

The plain truth is that, as the trustees put it in their final letter to the Office of Works, "to attempt to accommodate three important institutions, the Natural History Museum, the Imperial College of Science, and a much enlarged Science Museum, on so restricted a site shows a want of appreciation of the inevitable future of these institutions which is bound to lead to confusion and a waste of public money. Not only the Natural History Museum, but all three institutions, would soon be hampered in their growth." The propositions here advanced scarcely admit of dispute. The trustees point out that they have recently been enabled by the government to purchase land at Bloomsbury sufficient to provide for the extension of the departments located there in such a manner as to satisfy prospective needs of those departments for 100 years to come. Yet all that the Office of Works can say on behalf of its unhappy scheme for extending the Science Museum at the expense of the Natural History Museum is that "the vacant space to the east and west of the Natural History Museum is so great that it is hardly possible to suppose it will not afford abundant facilities for any extension of the Natural History Museum which may be required for the next twenty-five years"—which is just a quarter of the period for which the government have empowered the trustees to make provision at Bloomsbury. The comment of the trustees on this significant contrast appears to us to be quite unanswerable. They "feel bound to protest against the reversal at South Kensington of a policy so carefully considered and so universally endorsed"—as regards the departments at Bloomsbury, that is—"and they can not therefore, with due regard to their responsibilities, consent to give up land which will be urgently required in the near future for the extension of the Natural History Museum." To this most reasonable *non possumus*—reasonable because based on indisputable facts as well as on the authority of all competent experts—the Office of Works could only reply by a departmental *hoc volo, sic jubeo,* backed by the authority of the government. "The question of the revision of the boundaries has been considered by his majesty's ministers, and they have decided that such a revision can not be avoided in view of the pressing necessity for the building of a Science Museum." So far as we are aware no one disputes the pressing necessity for the building of a Science Museum. But surely no one who has studied the official correspondence or who has followed the discussion in our columns can defend or approve the policy of building such a museum at South Kensington in such a manner as must fatally hamper its own expansion and that of the Natural History Museum in the near future. There is manifestly no room for all three institutions on the same site. Two of them are there already, therefore the third must go elsewhere. That is the only rational solution of the problem, and it certainly ought not to be rejected by the mere fiat of his majesty's ministers without giving parliament and public opinion an opportunity of pronouncing judgment on the matter.—London *Times*.

## SCIENTIFIC BOOKS

*The Principles and Methods of Geometrical Optics.* By James P. C. Southall. 8vo. Pp. xxiii + 626. New York. The Macmillan Company. $5.50 net.